AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.-10.   (Canceled)

11.   (Previously Presented) An image decoding method of decoding encoded data encoded by an image encoding method of dividing image signals into blocks of different sizes, performing an orthogonal transform of each block, reading resultant orthogonal transform coefficients to obtain a coefficient string, dividing a coefficient string of a block of a size larger than a minimum size into a plurality of coefficient strings of a length equal to that of a coefficient string in a block of the minimum size, and performing entropy coding thereof, the image decoding method comprising:

a decoding step of performing decoding of the encoded data and obtaining the coefficient string;

a coefficient string constructing step of, when the coefficient string decoded in the decoding step is of a block of a size larger than the minimum size, constructing a coefficient string of the block of the larger size from a plurality of coefficient strings decoded in the decoding step; and

an inverse orthogonal transforming step of decoding an image signal by performing an inverse orthogonal transform on the coefficient string constructed in the coefficient string constructing step,

wherein the encoded data is encoded data of either a coefficient string consisting of 16 coefficients obtained by performing an orthogonal transform on the block of a 4x4 pixel size, and reading the orthogonal transform coefficients sequentially from a low frequency component, or a coefficient string consisting of 16 coefficients obtained by performing an orthogonal transform on the block of an 8x8 pixel size, reading the orthogonal transform coefficients sequentially from a low frequency component, and assigning the resultant 64 coefficients, from a low frequency component one by one in order, to four coefficient strings;

the decoding step performs decoding of the encoded data of the coefficient string consisting of 16 coefficients;

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the coefficient string constructing step, when the coefficient string decoded in the decoding step is of the 8x8 pixel size block, constructs the coefficient string consisting of 64 coefficients by reading and arranging the coefficients of the four coefficient strings of the 8x8 pixel size block, decoded in the decoding step, from a low frequency component one by one in order; and

the inverse orthogonal transforming step decodes the image signal by performing an inverse orthogonal transform on the coefficient string of the 4x4 pixel size block decoded in the decoding step, and on the coefficient string of the 8x8 pixel size block constructed in the coefficient string constructing step.

12.   (Previously Presented) An image decoding apparatus of decoding encoded data encoded by an image encoding method of dividing image signals into blocks of different sizes, performing an orthogonal transform of each block, reading resultant orthogonal transform coefficients to obtain a coefficient string, dividing a coefficient string of a block of a size larger than a minimum size into a plurality of coefficient strings of a length equal to that of a coefficient string in a block of the minimum size, and performing entropy coding thereof, the image decoding apparatus comprising:

decoding means for performing decoding of the encoded data and obtaining the coefficient string;

coefficient string constructing means for, when the coefficient string decoded by the decoding means is of a block of a size larger than the minimum size, constructing a coefficient string of the block of the larger size from a plurality of coefficient strings decoded by the decoding means; and

inverse orthogonal transforming means of decoding an image signal by performing an inverse orthogonal transform on the coefficient string constructed by the coefficient string constructing means,

wherein the encoded data is encoded data of either a coefficient string consisting of 16 coefficients obtained by performing an orthogonal transform on the block of a 4x4 pixel size, and reading the orthogonal transform coefficients sequentially from a low frequency component, or a coefficient string consisting of 16 coefficients obtained by performing an orthogonal transform on the block of an 8x8 pixel size, reading the orthogonal transform coefficients sequentially from a low frequency component, and

assigning the resultant 64 coefficients, from a low frequency component one by one in order, to four coefficient strings;

the decoding means performs decoding of the encoded data of the coefficient string consisting of 16 coefficients;

the coefficient string constructing means, when the coefficient string decoded by the decoding means is of the 8x8 pixel size block, constructs the coefficient string consisting of 64 coefficients by reading and arranging the coefficients of the four coefficient strings of the 8x8 pixel size block, decoded by the decoding means, from a low frequency component one by one in order; and

the inverse orthogonal transforming means decodes the image signal by performing an inverse orthogonal transform on the coefficient string of the 4x4 pixel size block decoded by the decoding means, and on the coefficient string of the 8x8 pixel size block constructed by the coefficient string constructing means.

13.   (Currently Amended) A computer readable medium ~~comprising~~ storing computer-executable instructions for performing animage decoding method of decoding encoded data encoded by an image encoding method of dividing image signals into blocks of different sizes, performing an orthogonal transform of each block, reading resultant orthogonal transform coefficients to obtain a coefficient string, dividing a coefficient string of a block of a size larger than a minimum size into a plurality of coefficient strings of a length equal to that of a coefficient string in a block of the minimum size, and performing entropy coding thereof, comprising:

a decoding step of performing decoding of the encoded data and obtaining the coefficient string;

a coefficient string constructing step of, when the coefficient string decoded in the decoding step is of a block of a size larger than the minimum size, constructing a coefficient string of the block of the larger size from a plurality of coefficient strings decoded in the decoding step; and

an inverse orthogonal transforming step of decoding an image signal by performing an inverse orthogonal transform on the coefficient string constructed in the coefficient string constructing step,

wherein the encoded data is encoded data of either a coefficient string consisting of 16 coefficients obtained by performing an orthogonal transform on the block of a 4x4

pixel size, and reading the orthogonal transform coefficients sequentially from a low frequency component, or a coefficient string consisting of 16 coefficients obtained by performing an orthogonal transform on the block of an 8x8 pixel size, reading the orthogonal transform coefficients sequentially from a low frequency component, and assigning the resultant 64 coefficients, from a low frequency component one by one in order, to four coefficient strings;

the decoding step performs decoding of the encoded data of the coefficient string consisting of 16 coefficients;

the coefficient string constructing step, when the coefficient string decoded in the decoding step is of the 8x8 pixel size block, constructs the coefficient string consisting of 64 coefficients by reading and arranging the coefficients of the four coefficient strings of the 8x8 pixel size block, decoded in the decoding step, from a low frequency component one by one in order; and

the inverse orthogonal transforming step decodes the image signal by performing an inverse orthogonal transform on the coefficient string of the 4x4 pixel size block decoded in the decoding step, and on the coefficient string of the 8x8 pixel size block constructed in the coefficient string constructing step.

14. – 27. (Canceled)